

REMARKS

Claims 1-14 and 16-18 are pending in the application. Claims 1-14 and 16-18 have been rejected. Previously allowable subject matter has been withdrawn in view of newly discovered references. No new matter has been added.

CLAIM REJECTIONS UNDER 35 USC § 102

Claims 1, 2, 4-6, and 14 have been rejected under 35 U.S.C. under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,068,421 to Long et al. (Hereafter “Long”). Applicants respectfully traverse the rejection in view of the following arguments.

Claim 1

Applicants respectfully disagree with the Examiner as to what is disclosed in Long. Figs 4 and 5 of Long depict a flame arrester in which there are a bank of plates 16. Clearly these are not the “two dimensional array of adjacent circular rods” as set forth in claims 1. Figs. 6 and 7 of Long depict an alternate embodiment using tubes. A review of the specification of Long indicates that Figs. 6 and 7 depict arrays of tubes that are perpendicular to each other. That is, there is a one dimensional array of tubes 30 which are separated by another one dimensional array of tubes 29 that run perpendicular to the first array of tubes 30. As such, there is not a two dimensional array of adjacent circular section rods each being generally co-aligned and arranged transverse to the flow direction as set forth in claim 1. As such, Long fails to disclose each and every element of claim 1.

One of the advantages of such a configuration, as set forth in claim 1, is control over the size of the gaps between the rods. Flame arrestors need to be tailored to the context in which they will work. Some are optimized for detonation risk (i.e. a small amount of flammable material traveling at high velocity) while others are optimized for a burn risk (i.e. a large amount at a low velocity). A burn risk requires tighter spacing than a detonation risk. Long is limited in that the spacing of the gaps must be at least one tube wide because of the alternating perpendicular rows. The present invention suffers from no such limitation.

Another advantage of the configuration set forth in claim 1 is the ease of cleaning of the rods. As discussed in the specification and claimed in claims 10-12 the configuration of claim 1

allows a scraper to be disposed between the rods and slid along the length of the rods to clean the fire arrester. The fire arrester of Long, because of its alternating perpendicular rows, does not allow for such easy cleaning using a scraper disposed between the rods.

In light of the above comments, Applicants respectfully submit that claim 1 of the present invention is not anticipated by, and are therefore in condition for allowance over, Long. Such action is kindly requested.

Claims 2, 4-6, and 14

Claims 2, 4-6, and 14 depend from claim 1 and as such incorporate each and every element of claim 1. For the reasons set forth above, Long fails to disclose each and every element of claim 1. As such, Long fails to disclose each and every element of claims 2, 4-6, and 14.

In light of the above comments, Applicants respectfully submit that claims 2, 4-6, and 8-14 of the present invention are not anticipated by, and are therefore in condition for allowance over, Long. Such action is kindly requested.

Claim Rejections under 35 USC § 103

Claims 8, 9, and 16-18 are rejected under 35 U.S.C. 103 as be as being unpatentable over Long. Claim 3 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Long in view of WO9205946A. Claim 7 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Long in view of JP403054354A. Claims 10 and 11 are rejected under 35 U.S.C. 103 as be as being unpatentable over Long in view of U.S. Patent No. 5,331,943 to Ko (hereafter "Ko"). Claims 12 and 13 are rejected under 35 U.S.C. 103 as be as being unpatentable over Long in view of U.S. Patent No. 4,437,968 to Elliot, (hereafter "Elliot"). Applicants respectfully traverse the rejections in view of the following arguments.

Claims 8, 9 and 16-18

Claims 8, 9, and 16-18 depend from claim 1 and as such incorporate each and ever element of claim 1. For the much the same reasons as discussed above with regard to the 35

USC 102 rejection, Applicants respectfully submit that Long neither teaches nor suggests each and every element of claim 1. Specifically, Long fails to teach or suggest that a two dimensional array of adjacent circular section rods each being generally co-aligned and arranged transverse to the flow direction. Indeed, Long, with its array of sheets or alternating perpendicular tubes, appears to teach away from such an array as set forth in claim 1. As such, Long fails to teach or suggest each and every element of claims 8, 9, and 16-18.

In light of the above comments, Applicants respectfully submit that each and every element of claims 8, 9, and 16-18 of the present invention are not taught or suggested by Long, and therefore claims 8, 9, and 16-18 are in condition for allowance over, Long. Such action is kindly requested.

Claim 3

Claim 3 depends from claim 1 and as such incorporates each and every element of claim 1. For the reasons discussed above Applicants respectfully submit that Long neither teaches nor suggests each and every element of claim 1. Specifically, Long fails to teach or suggest that a two dimensional array of adjacent circular section rods each being generally co-aligned and arranged transverse to the flow direction. Indeed, Long, with its array of sheets or alternating perpendicular tubes, appears to teach away from such an array as set forth in claim 1. As such, Long fails to teach or suggest each and every element of claim 3. The combination of Long with WO9205946A as set forth by the Examiner fails to cure this deficiency.

In light of the above comments, Applicants respectfully submit that each and every element of claim 3 of the present invention are not taught or suggested by either Long or WO9205946A, and therefore claim 3 is in condition for allowance over Long and WO9205946A. Such action is kindly requested.

Claim 7

Claim 7 depends from claim 1 and as such incorporates each and every element of claim 1. For the reasons discussed above Applicants respectfully submit that Long neither teaches nor suggests each and every element of claim 1. Specifically, Long fails to teach or suggest that a two dimensional array of adjacent circular section rods each being generally co-aligned and

arranged transverse to the flow direction. I Indeed, Long, with its array of sheets or alternating perpendicular tubes, appears to teach away from such an array as set forth in claim 1. As such, Long fails to teach or suggest each and every element of claim 7. The combination of Long with JP403054354A as set forth by the Examiner fails to cure this deficiency.

In light of the above comments, Applicants respectfully submit that each and every element of claim 3 of the present invention are not taught or suggested by either Long or JP403054354A, and therefore claim 7 is in condition for allowance over Long and JP403054354A. Such action is kindly requested.

Claims 10 and 11

Claims 10 and 11 depends from claim 1 and as such incorporates each and every element of claim 1. For the reasons discussed above Applicants respectfully submit that Long neither teaches nor suggests each and every element of claim 1. Specifically, Long fails to teach or suggest that a two dimensional array of adjacent circular section rods each being generally co-aligned and arranged transverse to the flow direction. Indeed, Long, with its array of sheets or alternating perpendicular tubes, appears to teach away from such an array as set forth in claim 1. As such, Long fails to teach or suggest each and every element of claims 10 and 11. The combination of Long with Ko as set forth by the Examiner fails to cure this deficiency.

In light of the above comments, Applicants respectfully submit that each and every element of claims 10 and 11 of the present invention are not taught or suggested by either Long or Ko, and therefore claims 10 and 11 are in condition for allowance over Long and Ko. Such action is kindly requested.

Claims 12 and 13

Claims 12 and 13 depends from claim 1 and as such incorporates each and every element of claim 1. For the reasons discussed above Applicants respectfully submit that Long neither teaches nor suggests each and every element of claim 1. Specifically, Long fails to teach or suggest that a two dimensional array of adjacent circular section rods each being generally co-aligned and arranged transverse to the flow direction. Indeed, Long, with its array of sheets or alternating perpendicular tubes, appears to teach away from such an array as set forth in claim 1.

As such, Long fails to teach or suggest each and every element of claims 12 and 13. The combination of Long with Ko and Elliot as set forth by the Examiner fails to cure this deficiency.

In light of the above comments, Applicants respectfully submit that each and every element of claims 12 and 13 of the present invention are not taught or suggested by either Long Ko, or Elliot and therefore claims 12 and 13 are in condition for allowance over Long, Ko, and Elliot. Such action is kindly requested.

CONCLUSION

In view of the remarks set forth above, Applicants contend that Claims 1-14 and 16-18 are presently pending in this application, are patentable, and in condition for allowance. If the Examiner deems there are any remaining issues, we invite the Examiner to call the undersigned at (617) 227-7400.

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Respectfully submitted,

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